TABLE OF CONTENTS

Volume V

JANUARY, 1921

A Review of the Series in the Spectra of the Elements 1
F. A. Saunders

Note on a Formula Associated with the Path of a Ray Through a Prism .. 12
H. S. Uhler

Note on Mr. T. Smith's Method of Tracing Rays Through an Optical System 14
James P. C. Southall

Dioptrics of the Eye 22
A. Ames, Jr., and C. A. Proctor

A Comparison of Monochromatic Screens for Optical Pyrometry 85
W. E. Forsythe

The Use of the Ulbricht Sphere in Measuring Reflection and Transmission Factors 96
Enoch Karrer

Notices 121

MARCH, 1921

A Wide-Angle Astronomical Doublet 123
Frank E. Ross

The Present Status of the Constants and Verification of the Laws of Thermal Radiation of a Uniformly Heated Enclosure 131
W. W. Coblentz

Spectroradiometric Studies of Polarization Phenomena 156
L. R. Ingersoll

Systems of Color Standards 160
A. Ames, Jr.

The Orientation of the Grains in a Dried Photographic Emulsion 171
L. Silberstein

A Method of Obtaining Radiant Energy Having the Visible Spectral Distribution of a Complete Radiator at Very High Temperatures 178
Irwin G. Priest

Courses in Optics and Optometry in Columbia University 184
James P. C. Southall

The Angular Deflections Produced on Transmitted Light Rays by Slightly Incorrect Interfacial Angles of Reflecting Prisms 193
F. E. Wright

The Spectral Distribution of Energy Required to Evoke the Gray Sensation . 205
Irwin G. Priest

Notices 210

415420

TABLE OF CONTENTS—Continued

MAY, 1921

The Glarimeter, an Instrument for Measuring the Gloss of Paper 213
L. R. Ingersoll

The Intrinsic Intensity of Light Transmitted Through a Slit as a Function of the Width and Depth of the Slit and of the Wave Length of the Light. 218
L. P. Sieg and A. T. Fant

The Photochemistry of the Sensitivity of Animals to Light 227
Selig Hecht

Photographic Reproduction of Tone 232
Loyd A. Jones

Report on Instruments and Methods of Radiometry 259
W. W. Coblentz

The Measurement of Solar, Sky, Nocturnal and Stellar Radiation 269
W. W. Coblentz

Optical Determination of Stress in Transparent Materials 279
A. L. Kimball, Jr.

Notices 290

JULY, 1921

The Propagation of Light in Rotating Systems 291
L. Silberstein

Standard Wave-Lengths 308
W. F. Meggers

An Unfamiliar Anomaly of Vision and Its Relation to Certain Optical Instruments 323
W. B. Rayton

Soft X-Rays from Arcs in Vapors 328
F. L. Mohler and Paul D. Foote

Note on Mr. T. Smith's Method of Tracing Rays Through an Optical System 334
C. W. Woodworth

The Blackening of a Photographic Plate as a Function of Intensity of Monochromatic Light and Time of Exposure, on the Basis of Hurter and Driffield's and Ross' Formulæ 336
P. S. Helmick

A Portable Vacuum Thermopile 356
W. W. Coblentz

The Orientation of the Grains in a Dried Photographic Emulsion 363
L. Silberstein

Some Major Problems in Photometry 366
E. C. Crittenden and J. F. Skogland

A Remeasurement of the Radiation Constant h by Means of X-Rays 376
William Duane, H. H. Palmer and Chi-Sun Yeh

Notices, New Committees 388

TABLE OF CONTENTS—Continued

SEPTEMBER, 1921

Dispersion in Optical Glasses, III 389
F. E. WRIGHT

Abolition of Astigmatism of Oblique Bundles in Case of a Single Lens 398
JAMES P. C. SOUTHALL

On Tracing Rays of Light Through a Reflecting Prism with the Aid of a Meridian Projection Plot 410
F. E. WRIGHT

The Coincidence Type Self-contained Range Finder 420
I. C. GARDNER

Silica-glass Prism for Refractometry of Liquids at Elevated Temperatures .. 441
F. R. v. BICHOWSKY and H. E. MERWIN

Atmospheric Corrections for the Harcourt Standard Pentane Lamp 444
E. B. ROSA, E. C. CRITTENDEN and A. H. TAYLOR

Note on the Determination of the Relative Expansions of Glasses 453
F. E. WRIGHT

Some Problems of Physiological Optics 461
F. K. RICHTMYER

Notices and Reviews 466

NOVEMBER, 1921

A Proposed Standard Method of Colorimetry 469
HERBERT E. IVES

A New X-Ray Diffraction Apparatus 479
WHEELER P. DAVEY

1920 Report of Committee on Pyrometry 494
W. E. FORSYTHE

Supplementary Note on the Frequencies of Complementary Hues 514
IRWIN G. PRIEST

OFFICERS

OF THE

OPTICAL SOCIETY OF AMERICA

FOR THE YEAR 1921

President:	J. P. C. SOUTHALL	Columbia University, New York City, N. Y.
Vice-Pres:	C. E. MENDENHALL	University of Wisconsin, Madison, Wisconsin
Secretary:	IRWIN G. PRIEST	Bureau Standards, Washington, D. C.
Treasurer:	ADOLPH LOMB	Rochester, N. Y.

The Council consists of the above officers, the Editor-in-Chief of the JOURNAL, the past President, F. K. Richtmyer, and the following elected members: P. G. NUTTING, C. E. K. MEES, L. A. JONES, and W. E. FORSYTHE.

The object of the Optical Society of America is to serve the interests of all who are engaged in any branch of optics from fundamental research to the manufacture of optical goods.

The Constitution provides that anyone who had contributed materially to the advancement of optics shall be eligible to regular membership in the Society, with the privilege of voting and holding office. Anyone interested in optics is eligible to associate membership.